AMENDMENTS TO THE CLAIMS

Claims 1-21 (cancelled)

22. (Previously Presented) A method for estimating a flow rate of a fluid from a formation, comprising:
pumping to remove the fluid from the formation;
measuring fluid pressure during pumping;
tracking a volume pumped during pumping; and
estimating the flow rate of the fluid from the measured pressure and volume.

23. (Previously Presented) The method of claim 22, wherein tracking volume comprises tracking a position of a pumping piston.

24. (Previously Presented) The method of claim 22 further comprising:
estimating a fluid property comprising at least one of the set consisting of permeability, mobility and compressibility for the fluid from the flow rate.

25. (Previously Presented) The method of claim 24 further comprising:
optimizing a fluid pumping rate based the property to acquire the fluid substantially in a single-phase.

26. (Previously Presented) The method of claim 22, wherein the measuring the fluid pressure further comprises measuring pressure in a flow line for the fluid.

27. (Previously Presented) The method of claim 24 further comprising:
detecting a pumping problem if the property is outside a predetermined limit.

28. (Previously Presented) The method of claim 24, further comprising estimating a quality of the fluid from the property over time.

29. (Previously Presented) The method of claim 24, further comprising:
determining a correlation coefficient for estimates of the property; and

detecting a pumping problem based on the correlation coefficient.

30. (Previously Presented) The method of claim 22, further comprising:
monitoring the property versus time to determining formation cleanup.

31. (Previously Presented) The method of claim 22, further comprising:
monitoring the flow rate versus time to determine whether a formation fluid sample is in a single phase state.

32. (currently amended) A method for determining success of a pumping operation comprising:
estimating flow rate and pressure for a ~~pumped~~ fluid pumped from a formation; and
estimating a correlation between the flow rate and pressure; and
estimating the success of the pumping operation based on the correlation.

33. (Previously Presented) The method of claim 32 further comprising:
maximizing a pumping rate based on the correlation, to acquire the fluid in a single-phase.

34. (Previously Presented) The method of claim 32 wherein success of the pumping operation further comprises a limited pressure drop in a sample acquired.

35. (currently amended) An apparatus for retrieving fluid comprising:
a pump whose volume can be tracked that retrieves the fluid from a formation;
a pressure gauge that measures pressure of the fluid; and
a processor programmed to track success of retrieving the fluid from volume and pressure.

36. (Previously Presented) The apparatus of claim 35, where processor

changes speed of pumping to optimize retrieval.

37. (Previously Presented) The apparatus of claim 35, further comprising:
a tank for holding the fluid.

38. (Previously Presented) The apparatus of claim 35, wherein the processor is programmed to estimate a fluid property selected from a group consisting of permeability, mobility and compressibility.

39. (Previously Presented) The apparatus of claim 38, wherein the pump removes the fluid at a rate based on the property to acquire the fluid substantially in a single-phase.

39. (Previously Presented) The apparatus of claim 38 wherein the processor is programmed to provide an indicator to maximize the pumping rate based on the property, to acquire the fluid in a single-phase.

41. (Previously Presented) The apparatus of claim 35, wherein the pump removes the fluid from the formation and pumps the fluid into a sample chamber through a flow line.

42. (Previously Presented) The apparatus of claim 38, wherein the pressure gauge measures fluid pressure in the flow line.

43. (Previously Presented) The apparatus of claim 38, wherein the processor detects a pumping problem if the property is outside a predetermined limit.

44. (Previously Presented) The apparatus of claim 38, wherein the processor estimates a quality of the fluid from the property measured over time.

45. (Previously Presented) The apparatus of claim 38, wherein the processor is

programmed to estimate a correlation coefficient for estimates of the property and detect a pumping problem based on the correlation coefficient.

46. (Previously Presented) The apparatus of claim 38, wherein the processor monitors the property versus time to determine formation cleanup.

47. (Previously Presented) The apparatus of claim 38, wherein the processor is programmed to monitor the property versus time and estimate whether the fluid sample is in a single phase state.

48. (Previously Presented) A system for estimating a property of a fluid, comprising:
a downhole tool;
a pump in the downhole tool that removes the fluid from a formation;
a pump position indicator;
a pressure gauge that measures fluid pressure corresponding to a pump piston position indicated by the pump position indicator; and
a processor that estimates the property of the fluid from the measured pressure and pump position.

49. (Previously Presented) The downhole tool of claim 48, wherein the property
is selected from a group consisting of permeability, mobility and compressibility.

50. (Previously Presented) The downhole tool of claim 48 wherein the pump removes the fluid at a rate based on the property to acquire the fluid substantially in a single-phase.

51. (Previously Presented) The downhole tool of claim 48 wherein the processor provides an indicator to maximize the pumping rate based on the

property, to acquire the fluid in a single-phase.

52. (Previously Presented) The downhole tool of claim 48, wherein the pump removes the fluid from the formation and pumps the fluid into a sample chamber through a flow line.

53. (Previously Presented) The downhole tool of claim 52, wherein the pressure gauge measures fluid pressure in the flow line.

54. (Previously Presented) The downhole tool of claim 48, wherein the processor detects a pumping problem if the property is outside a predetermined limit.

55. (Previously Presented) The downhole tool of claim 48, wherein the processor is programmed to estimate a quality of the fluid from the property measured over time.

56. (Previously Presented) The downhole tool of claim 48, wherein the processor is programmed to estimate a correlation coefficient for estimates of the property and detect a pumping problem based on the correlation coefficient.

57. (Previously Presented) The downhole tool of claim 48, wherein the processor is programmed to monitor the property versus time to estimate formation cleanup.

58. (Previously Presented) The downhole tool of claim 48, wherein the processor monitors the property versus time to estimate whether the fluid is in a single phase state.